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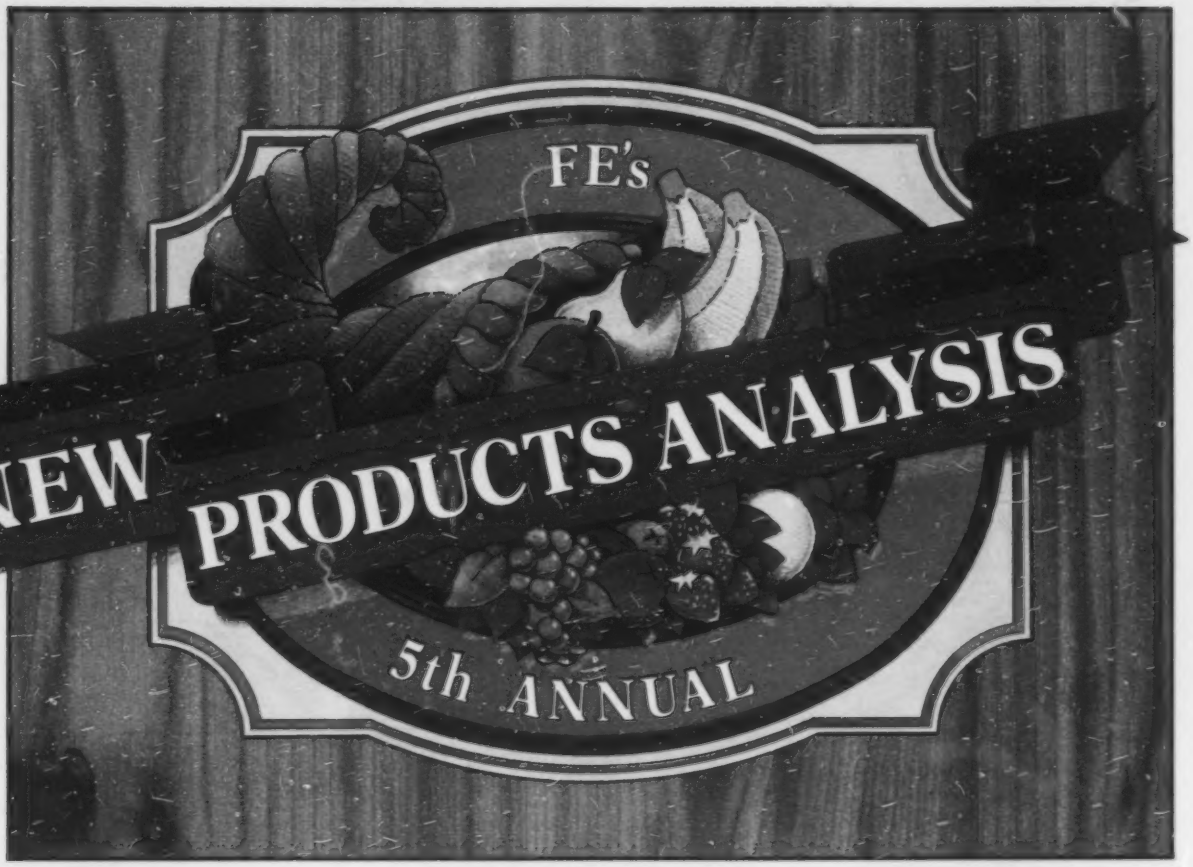
OCTOBER 1985

Chilton's Food Engineering

In this issue: FOOD PACKAGING



Is the new products race overheating?

The love affair with new products continues. But when is enough really enough?

They bring their troubles to him

This Florida researcher specializes in tackling some of the food industry's toughest problems.

FDA's Action Plan

Is real change afoot for this industry regulator? Or is the new plan a paper tiger?

Chilton's Food Engineering

ABOUT THE COVER

Food Engineering's annual New Products Analysis considers major new patterns and trends emerging in the highly competitive new products derby.

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CAMPBELL FROZEN FOODS BLITZ: Through its subsidiaries, Campbell has launched a frozen foods campaign ranging from Mexican to croissants. **PAGE 30**

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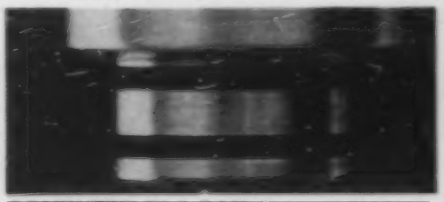

COMPUTER IN A CAN: Computerized temperature sensor travels with the package to help processors better control time-temperature parameters. **PAGE 52**

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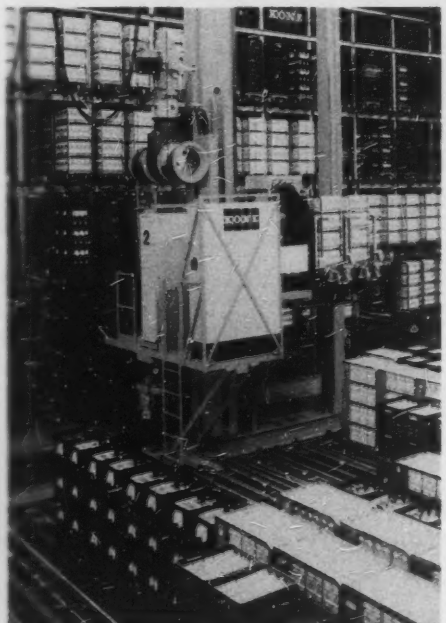
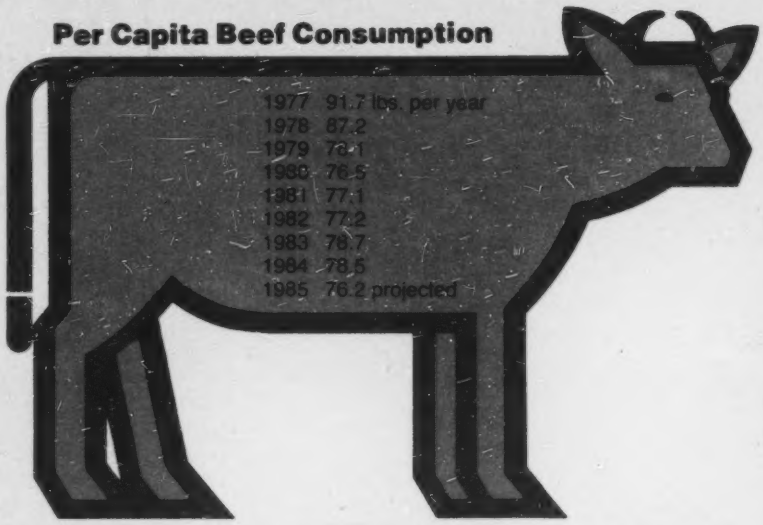


COLD STORAGE SYSTEM: This computerized system has given a Dutch dairy one of the most streamlined food products handling system systems in Europe. **Page 104**

Special Emphasis

HANDLING & DISTRIBUTION EQUIPMENT:
Everything from laser guns to palletizers is featured in this month's special focus on Handling & Distribution equipment in this issue's new product section. **Pages 99 to 112**

Beating the meatpacker blues with value-added processing



Precipitated by the steady decline in per capita beef consumption, the red meat industry is scrambling for alternatives. Down steadily since 1977, consumption is projected to hit a low of 76.2 lbs. this year.

Running shredded beef and seaweed extract through an extruder to get refabricated steak hardly sounds like part of a mainstream beef packing operation. But that's exactly what one major packer is doing and others may follow suit. You see, the red meat packing industry is in trouble. Competition from the poultry industry, resistance to high meat prices and public health concerns about red meat have led to a steady decline in beef consumption since the mid-70's.

A Federal Safety Inspection Service (FSIS) report indicates that firms in the red meat industry will have to move to higher value-added products, such as prepared frozen meat entrees, which have a greater profit margin, in order to increase profits. And some red meat packing firms are proceeding to do just that.

With a relatively low rate of return on sales (historically around 0.9 percent), meat packing firms depend on high volumes for survival. Per capita consumption of red meat is down.

Industry has responded by:

- Reducing payroll costs
- Moving operations closer to feedlots
- Increasing company size

FSIS says that in the future, the remedies used by the red meat industry to maintain profit levels may not be sufficient. Payroll now only comprises 5.6 percent of value of shipments compared to almost 90 percent for the cost of raw materials and there is little indication that animal costs will or can be forced down. Most major firms have already relocated closer to the feedlots and existing technologies place a limit on the economies of scale that can be gained from increasing plant size.

WILLIAM C. DRENNAN
Senior Editor

Montfort's strategy

Montfort of Colorado, Inc. is testing the feasibility of manufacturing several types of value-added products. Besides refabricated steak, the company is also test-marketing a new line of "Montfort Gold" meats, including precooked London Broil that is ready to slice and heat, and ready-to-eat sliced pastrami and corn beef in small foil packages. Other developments progressing at Montfort's Hastings, Neb. processing plant include premixed meat loaf, barbecue sauces and shredded meats, targeted for the microwave oven market.

According to Kenneth Montfort, president, the beef industry has to develop high-quality convenient and healthful beef products in order to become sound

(Continued on pg. 26)

ACQUISITIONS SUMMARY

Safeway sells Australian interests

Agreement has been reached for the acquisition of Safeway's Australian interests by Woolworth's Limited. (no connection with the U.S. firm, F.W. Woolworth Co.) The agreement provides for Safeway to receive a 20 percent equity interest in Woolworths. At current market prices, this would place the value of Safeway's interest at more than 100 million U.S. dollars. Woolworths is the second largest retailer in Australia, operating more than 850 stores. Australia Safeway Limited has 124 stores in Victoria, New South Wales and Queensland with sales of over 850 million U.S. dollars. The merger will provide a high degree of compatibility and regional fit with very overlaps.

MTX to acquire Huber Brewing Co.

Headed by William F. Smith, former CEO of Pabst Brewing Co., MTX, Inc., a recently formed Milwaukee-based holding company reached an agreement to acquire Jos. Huber Brewing Co., a privately held firm based in Monroe, Wis. Huber's annual sales are an estimated 250,000 barrels, with Augsburger and a Huber brand as the top labels. Smith said MTX and Huber Brewing want to expand the product line outside the Midwest. U.S. distribution rights for imported beers will be sought.

Dean Foods expands through acquisition

Dean Foods has announced the acquisition of Bond Pickle Co. of Oconto, Wis., and Ye Olde Tavern Cheese Co. Inc. of Chicago. Both acquisitions were for cash, with the prices withheld. The company says that the acquisition of Bond will increase Dean Foods' annual pickle sales to $85 million. Chairman and CEO Kenneth Douglas says that sales of Ye Olde Tavern Cheese spreads can be "substantially increased" by marketing them with Dean's line.

(Continued on pg. 28)

(Continued from pg. 25)

again. Montfort of Colorado is the first major beef packer to produce convenience meats for retail meat counters. The company is also the beef packer that most resembles today's chicken corporations. Montfort has feedlots, packing plants, a processing and portioning plant and a distribution company.

The problem with product development in the beef industry is that it has to be a secondary strategy. Overcapacity and fierce competition have forced beef packers to concentrate on cost cutting measures just to survive. Montfort copes by attempting to produce new products without the benefit of market research or advertising budgets.

Another strategy that takes a back seat to cost cutting is long-term research projects. "We have for 20 years borrowed most of our technology from the Europeans," says Dr. Burdette Breidenstein of the National Livestock & Meat Board, Chicago. According to Breidenstein, the shortfall in meat research in the U.S. can be attributed to widespread company takeovers and the installation of managers who do not understand the industry.

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Hormel forms Deli Division

Geo. A. Hormel & Co., Austin, Minn., has long been involved in the processing end of the meat business. The company has announced an accelerated program designed to position the company as a full-line supplier of ready-to-serve specialty items to the delicatessen market.

A newly-named Deli Division, operating as part of the Meat Products Group, will replace the Dry Sausage Division. Efforts will be made to expand the deli line to include cheese and turkey products, fish and seafood, frozen entrees and related premium, specialty items.

Beatrice merges three meat divisions

In a cost-cutting move, the Refrigerated Food Group of Beatrice U.S. Food has merged three companies to form Beatrice Meats, Inc. Beatrice Meats' product line includes poultry and meat products from Swift & Co.; pre-packaged meat and deli products from Peter Erkrich and Sons; and corned beef products from E.W. Kneip, Inc.

The move provides Beatrice with a unified salesforce totalling 832 representatives, driver sales people, brokers and distributors. Beatrice will have a better shipping program with fewer trucks and less paperwork. Single invoice billing will represent multiple brands.

Coke refuses to disclose secret formula

Coca-Cola Co. is refusing to obey a federal pre-trial order to disclose its secret soft-drink formulas. In late August, U.S. District Judge Murray Schwartz had ordered Coke to release several soft drink formulas to representatives of forty bottlers who are fighting the company over syrup pricing. A lawyer for Coca-Cola said that disclosing the secret formula to the court, even under a stringent protective order, "would subject the Coca-Cola system to grave risks..."

OCTOBER 1985

A Food Engineering Exclusive

FE's

NEW PRODUCTS ANALYSIS

5th ANNUAL

Is the pace of new product development slowing? Sky-high promotion and marketing costs are making the business of new product roulette an expensive proposition. Food Engineering combs the 1984/85 product battlefield for the winners, the wounded, and the emerging forces.

Kevin Hannigan, Features Editor

Innovative new products flowed like water in 1983, but "me too" products were the rule in 1984. Actually, the major news in food marketing in 1984-85 was not so much new products as the many mergers that took place.

Is the current new-product boom over? It looks that way to many food marketers, some of whom are reconsidering the wisdom of the "new-product pipeline." Does it really have to be full all the time, flooding the marketplace with untested products that are expensive to produce, have no ready market and take up valuable shelf space? Or is it wiser to target your products where a need already exists?

Product ebb and flow

New food products are always with us. There will always be a large number of "new" products featuring label changes, formula changes, or additions of new flavors and colors.

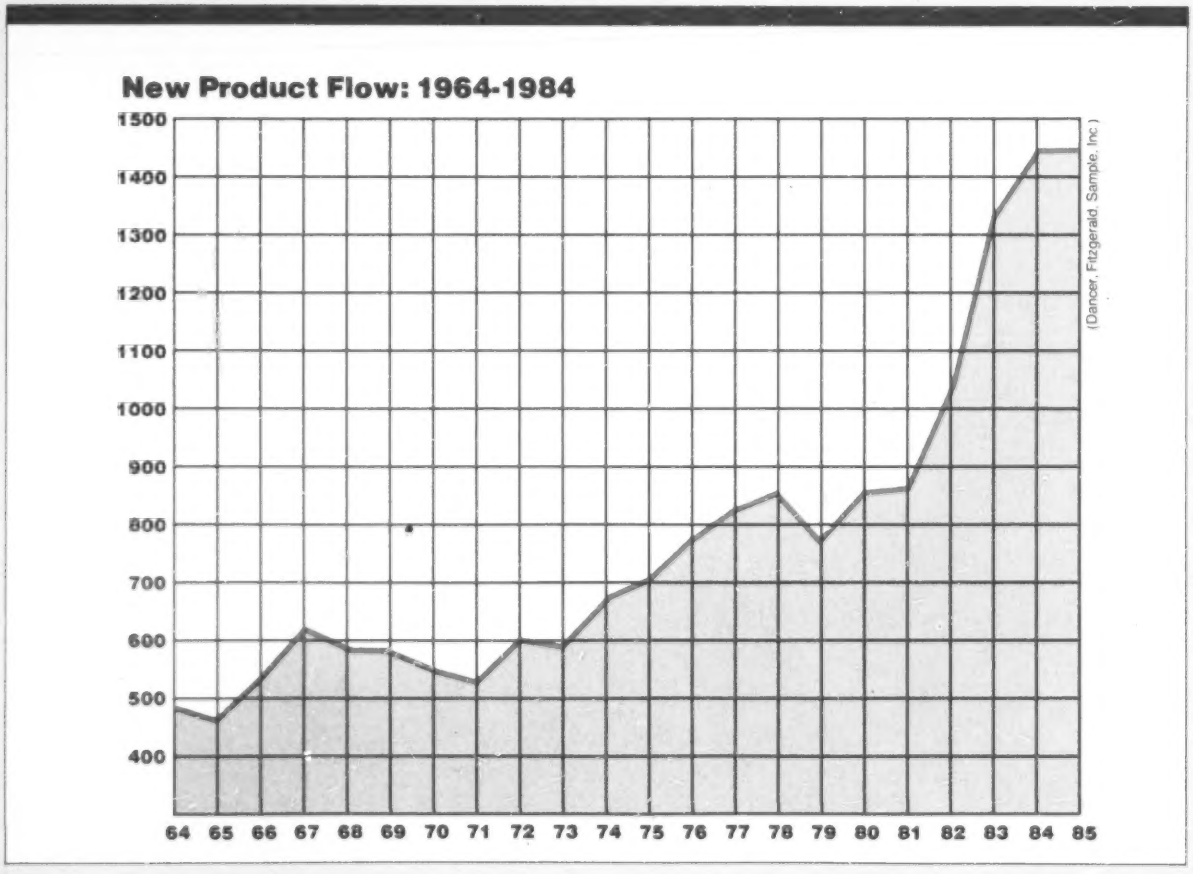
"In 1984," reports Martin Friedman, editor of Dancer Fitzgerald Sample's *New Product News*, "we reported the introduction of 1,988 new 'traditional' supermarket products, an increase of 10.3% over 1983's level. When you add in all the different flavors, colors and varieties, the aggregate total was over 7,000 new food and non-food items out there trying to win the shopper's attention. And, so far in 1985, the high percentage increases continue."

Truly innovative new products are another story. When something is *really* different, it changes the market. And it almost always reflects a major change in packaging, food science, processing technology or a shift in thinking for the society as a whole. All of these factors, and more, have had a part in shaping our current food marketplace. And the waves of change continue to spur new developments.

New product trend waves seem to be an evolutionary phenomenon, caused partly by industry "push" and partly by marketplace "pull." And, like all waves, there's a downside. Periodically, the market corrects itself, shaking out new products which don't measure up and older products which are no longer needed. We may be in a "shake-out" period now.

This ebb and flow of new products is so regular (note chart, page 66) that there appears to be a "new-product cycle" which peaks about every 5-6 years. Since 1984 was a "peak" year, new product introductions may stabilize for a year or two, and even decline slightly before surging to a new high about 1990. Considering the glut of new products in some categories, usually imitating sales leaders, this plateauing

The number of new products introduced each year has gone up, up, up for the past two decades. But you'll notice that the curve peaks every 5-6 years as the market corrects itself.



seems reasonable, even predictable.

Balancing this "normal plateau" scenario is the possibility that the curve will continue to jump off the chart. Methods of distribution are still open to change, as was proven by the success of *California Cooler*. High-barrier plastics, and new developments in glass and metal containers, are boosting sales of condiments. A host of new ingredients—some of them products of biotechnology—will have a major effect on food products over the next five years. And new technology, such as extrusion cooking, is changing the way we process foods.

There's another variable to consider, too. The food industry is a melange of nearly a dozen separate industries, some of which are growing and some of which are not. Most of the radically different new items have come from industry subsegments which were once stagnant and are now growing. It's almost certain that some of the currently stagnant segments will startle us with new product concepts in the near future.

And then, the curve will soar again.

The consumer connection

In the near future, predicts Campbell CEO Gordon McGovern, ethnic and regional foods will do extremely well. Consumers will vote for chicken and fish with lighter breading and fresh new tastes. And fruit juices, such as Campbell's *JuiceWorks*, will continue to be favored by school children and their families.

"There are two trends here," says McGovern. "One is a new sophistication in U.S. tastes and food preferences. The other is towards convenience. Take a look at microwave oven sales and you can see it. The handwriting is on the freezer, you might say. We noticed it and *Le Menu* proved us right. Now, we're making all of our frozen products microwaveable."

That's target marketing, fitting the product to the consumer. The potential consumer can be isolated into regional and ethnic groups, or defined by age, sex, income and marital status. But reaching these groups with a new food product they'll buy is not always easy. First, you have to identify their needs.

All broad product trends are connected via the consumer. And they cut across product lines. Thus, the trend to natural foods has led to real fruit being added to everything from cookies to croissants. The consumer connection makes waves, and products in many categories are moving forward on those waves.

A current example of this truth, notes Martin Friedman, is the movement of successful fast-food outlet products into supermarkets. The flow includes: *Banquet Hot 'n Spicy Chicken; Weaver Chicken Nuggets; Tyson Chicken Patties; ConAgra Entree Express; Micro Magic Potatoes; Ore-Ida Lites; Heinz Steakwich; Pillsbury Microwave Pizza; Benihana Entrees; Swanson Great Start Sandwiches; Sara Lee Le San*Wich; Campbell Fresh Chef Salads;* and *Oscar Mayer Stuffin' Burgers.* "We're going to see a speed-up in this trend," predicts Friedman. "As soon as you read about a new fast-food success, you'll see a similar product in stores in six months."

One factor in new product development is revolutionary new packaging, such as these plastic squeeze bottles used for Welch's jellies.

This "crossover" effect works both ways. With 40% of consumers changing their eating habits because of nutritional concerns, the National Restaurant Association's *NRA News* reports that lighter, healthier and more nutritious foods and beverages are among the fastest-growing menu items in America. Specifically, decaffeinated coffee, fruit as a side dish, diet colas, and main dish salads are soaring.

In packaged products, this interest in health and nutrition has spurred sales of light and low-alcohol beers, wine coolers, and now pre-mixed cocktails. There's also a shift away from shortenings to vegetable oils, from saccharin to aspartame, from candy to fruit snacks, etc.

New product trends that may affect the market in the future already are apparent. For example, the interest in spicy, ethnic and tropical products may result in a series of foods with a Cuban or Puerto Rican flavor. The interest in finger foods, natural products and extruded items may produce new coated fruit snacks to compete with candy. And the emphasis on foods that improve health may lead to acid-control products for those with ulcers, and calcium-enriched products for older women.

On the following pages, *Food Engineering* attempts to identify and explain some of the broad trends affecting the food market today, and to suggest what the future might hold.

(Continued on page 70)

Broad new-product trends tend to reflect consumer desires. Currently, consumers demand high-quality foods and greater convenience in home preparation. Increasingly, food preparation takes place in today's food plants—not in the kitchen. Many U.S. kitchens are today designed and outfitted for "heat-and-serve" preparation. But while consumers may be spending less time on food preparation, they are demanding even more in the way of quality. Convenience and quality: these are the engines of change in today's food development picture.

The food industry's response to these demands has been dramatic and prolific. The last 5-6 years have seen an unprecedented outpouring of new foods and beverages. At the same time, the dual demands of quality and convenience affords U.S. processors enormous opportunity for value-added manufacturing. The more manufacturing and preparation time devoted to a product, the more premium the price and, potentially, the more premium the margin.

Within this general pattern, *Food Engineering* has sought out trends within the various segments of the food business over the past 18 months. Here are some key developments.

BAKERY: A QUALITY TOUCH

A slow-growing population, along with concerns for health and nutrition, should suggest modest gains for bakery treats. Yet, soft and chewy cookies are one of the most successful new product types to hit the stores in the past two years. P&G's *Duncan Hines* line, Nabisco's *Almost Home* and Keebler's *Soft Batch* cookies are all successful. And Keebler has even followed up its success with regular Soft Batch cookies by adding a chocolate-enrobed version.

"Healthy" foods may be a fading trend. *Weight Watchers Bread* arrived last year, but it was one of the few new products offering nutritional benefits. Rumors of fiber-enriched variety breads, cookies and crackers persist, but none have impacted on the market. Has the public's concern for nutrition really ebbed, or does it want something a little more exciting than "plain and wholesome" foods?

Chances are, it's the latter case. Where consumers can chose between plain and fancy foods, they're chosing fancy. One result of this choice is that white bread rolls and sweet baked goods increased last year, while bagel sales fell and white bread lost ground to specialty breads and upscale baked items. Cookies did significantly better, and cracker sales rose even faster.

The move is toward higher-quality baked items, the equivalent of gourmet foods. An example is *Pepperidge Farm Mustard Bran Bread*, which may or may not succeed. Where the consumer's desires can be tied to another current trend, though, such as convenience, sales are up. French toast, for instance, disguised as a gourmet "Monte Cristo" sandwich,

Campbell rationalizes new-product effort

Campbell Soup Company is fine tuning its new product pipeline to be more cost effective and more profitable. Extremely active in introducing new products during the past five years, the firm leads the "Top 20 Food Marketers" list with 334 flavors or varieties—averaging 1.3 new items every week over the five-year period. Some of these have been very successful, primarily *Prego Spaghetti Sauce* and *Le Menu Frozen Dinners*, and future Campbell winners may include refrigerated salads, microwaveable soups, Pepperidge Farm ice cream and granola bars.

But it's also true that Campbell's profits dropped 5% for the fourth quarter ended July 28, its second consecutive quarterly decline. Net income for the quarter was $39.4 million, down from $41.6 million. Yet sales were $906.6 million, up from $838 million a year ago.

The past is a lesson to be learned, they say. And Campbell has learned that its new product program is expensive, especially those new products which require totally different production facilities. Thus, the firm's president, R. Gordon McGovern, has laid down The Law.

In future, Campbell will control costs more rigidly, and will concentrate on those new items with the greatest chance of success. The steady flow of new products will continue, but the cost of introduction will be rationalized to reduce the risk. And to minimize production costs, many items will be "spinoffs" from current successful products.

First, Campbell is jumping into the $430-million dry-soup category—estimated to acount for about 26% of total soup sales—with *Campbell's Quality Soup and Recipe Mixes*, a 6-item line of "natural" products made without preservatives or artificial flavors. Meanwhile, Campbell is expanding distribution of its *Home Cookin'* line, an upscale version of its *Chunky Soups*. And two new varieties—*Chunky Fisherman's Chowder* and *Chunky New England Clam Chowder*—have been added to the latter line. The firm also has gone national with *Gold Label Creamy Natural Soups*, a series of premium products you'd expect to find only in restaurants.

is a newly popular fast-food item.

Snack cakes are doing well, too. The consumer's sweet tooth is back, and all kinds of confections are doing better. One brand-new product from Pillsbury is *Pudding Pockets*, cupcakes with pudding centers, an updated version of cream-filled cupcakes. And Tasty Baking Co. has gone into vending packs of small doughnuts—even building a complete doughnut plant inside its main facility.

CROISSANTS, CAKES

Croissants are the hottest trend in baked goods. Now a $700-million business, thanks to *Sara Lee Croissants*, they're multiplying as fast as new variations can be developed. Local and regional bakers who deliver fresh to stores have joined the croissant crusade, too. Most of the new products combine the elements that are needed for success in 1985-86, but the best way to succeed is to know your market.

At Pepperidge Farm, *all* new product efforts are aimed at addressing consumer needs. Leading the list are new *Petite Croissants*, smaller-portion items for breakfast or lunch which also double as dinner rolls. "They're equally at home with a soup or salad," says Craig Rydin, frozen foods marketing director.

Pepperidge Farm, which claims a 23% share of frozen sweet goods sales, is changing to stay ahead. "Sales of *Iced Cakes* are up 20% and *Old Fashioned Muffins* now hold 96% of the market," says Rydin. "That's the kind of lead we like." In *Iced Dessert Cakes*, the firm has over 50% of the market; in turnovers and breakfast muffins, it *is* the market.

Cholesterol Free Pound Cake and *Single Serving Desserts* are other new PF products expected to have wide acceptance. The new pound cake, formulated with the "health" segment in mind, is a rich-tasting, golden cake made with margarine and a cholesterol-free egg substitute. "It's not a 'diet cake' per se," says Rydin, "but it's specially prepared for consumers who are sensitive to cholesterol intake."

Innovative new products such as these should do well in 1985-86 as the total market for bakery items grows about 2.7%. Growth should range from 2.1% for bread and related products to more than 4.5% for cookies and crackers. And the hottest new trend may be high-fiber breads, cookies and crackers—if the moisture problem can be solved.

The trouble with regular fiber-enriched cookies, says Allen Morrison, export marketing manager for Canadian Harvest, is that they absorb *too much* moisture, and "sort of swell up." Morrison's firm offers a wide variety of fiber products for use in foods, and even blends these products to solve specific problems. So, now, his firm is working on a sandwich snack with fiber, flavor, sugar, etc. in the middle and regular crackers on the outside. If there's any "swelling," it'll just make the flavored filling larger, not the crackers.

BEER: MATURE MARKET

Alcoholic beverages in general have done well in the past two years, but there are signs weakness. Beer sales are flat, according to Business Trend Analysts. The brewing industry is in a long-term decline, and it could get worse.

Young adults drink more than half the beer sold in the U.S. But they'll drink more wine and liquor—and less beer—as they age. Meanwhile, society is working against brewers, too. The drinking age is is being raised again, public drinking is actively discouraged, and the campaign to reduce drunk driving has eliminated "Happy Hour" in many places. More importantly, however, beer consumption will slow because fewer persons were born between 1965 and 1980, so fewer are coming of age.

New products entering this declining market shouldn't expect to do very well. Yet, says BTA, there's been a flood of new products as brewers race to establish an entry in each category of an increasingly segmented market.

Light beers and low-alcohol beers led this surge, with mixed results. Sales of light beer are

(Continued on next page)

New Product Leaders—1980 to 1984

	1980	1981	1982	1983	1984	Total
Campbell Soup	54	21	77	90	92	334
Nestle	86	59	52	33	63	293
General Foods	41	59	42	49	88	279
Beatrice	20	48	49	79	38	234
Dart & Kraft	28	28	48	22	80	206
Consolidated Foods	32	48	41	20	49	190
Lever/Lipton	29	13	35	72	41	190
Pillsbury	35	25	32	43	53	188
General Mills	26	26	47	25	51	175
H. J. Heinz	32	26	34	27	51	170
Borden	15	25	44	35	47	166
IC Industries	7	19	30	28	57	141
Nabisco Brands	32	18	13	44	33	140
R. J. Reynolds	40	14	10	29	32	125
Quaker Oats	19	17	21	39	20	116
ConAgra	29	12	21	33	19	114
Ralston-Purina	13	15	16	15	38	97
Kellogg	7	20	22	18	11	78
Coca-Cola	11	5	19	10	12	57
Pepsi-Cola	4	7	10	27	1	49
Totals	**560**	**505**	**663**	**738**	**876**	**3,342**

(Source: Dancer Fitzgerald Sample *New Product News*)

plateauing, and low-alcohol beers may soon be just a memory as more and more young drinkers opt for the status of wine coolers.

Premium beers (*Budweiser, High Life*, etc.)—the largest segment of the beer market—were hit hardest by the "light brigade" and should continue to decline 2% annually through 1993. But superpremiums (*Michelob, Lowenbrau*, etc.) could grow 6% per year. These superpremiums will have to fight off the imports, however, which are taking most of the growth in the higher-priced end of the market.

Popular-priced beers (e.g., *Old Milwaukee, Hamm's, Blatz, Iron City*, etc.) showed unexpected strength during the recent recession. This previously "dying" category has been revitalized with new products, principally Stroh's *Old Milwaukee*. But as consumer incomes rise, volume in this category should erode.

The future for U.S. brewers is still bright. The market should boil down to mainly high- and low-priced beers, with imports continuing to gain. During this period of relative stability, however, expect to see brewers moving considerable sums of their investment into new areas of competition where their marketing expertise can provide an instant advantage. One example is Anheuser-Busch's foray into theme parks and—with its new *Budweiser Eagle Snacks*—the packaged foods industry.

Light beers will continue to do well, making up more than one-third of all U.S. beer consumption by the early 1990s. This success will draw even more entries into the market, but the leaders will remain *Miller Lite* and *Bud Light*. Most of these new light beers should find rapid market acceptance, followed by slow, steady sales gains. That was the case with *Coors Light, Stroh Light*, and *Lone Star Light*.

WINE: UPSCALE CHOICE

Since drinking has become less of a social/recreational affair and more of a status symbol, expect to see more drinking at home and in upscale restaurants, but much less at bars, beaches and ballparks. Expect also that brewers will try to follow its primary target market—the baby boomers—as they age and change.

This aging of America implies a shift away from beer and toward other alcoholic beverages. As we grow older, we increasingly prefer wine and distilled spirits over beer. According to *Food Industry Futures*, most at-home drinking is done by the 45-54 age group. And older singles spend almost three times as much for wine at home as youngsters.

Americans are drinking more wine these days, but *all* of the increase is in wine coolers. Dessert and table wines have been declining for years, mainly because only about 40% of U.S. adults drink wine. And half of that is consumed by women. So most of the new table and dessert wine products are aimed at this group. The trend is to new and more convenient packaging, and greater variety—wines for every occasion.

As more women become full-time workers (MRCA Information Services says it's more than 50% now, and should reach 60% by 1995), wine consumption should increase. Then, more families will have two or more wage earners—and more discretionary income.

Since women drink mostly wine, and men drink mostly beer, and both like a cocktail now and then, what do they drink when they're at home together? To solve this problem, and attract more young drinkers, distillers are developing new "lighter," prepackaged cocktails that make drinking more pleasurable. *Jim Beam and Cola* was an early indication of this new trend. A premixed gin & tonic (using *Beefeater* gin) being tested in Boston is another. The idea is to identify the brand of gin with the mixed drink. Now, it's likely that "Rum & Coke" will become "Bacardi & Coke."

There's a marketing trend here worth noting. The newer wine coolers are identified with major brand names (Seagram's, Schenley, etc.) and get a free ride on the major label's status. And the more-successful light beer entries in recent years—such as *Old Milwaukee Light, Hamm's Special Light* and, surprisingly, *Iron City Light*—also have been linked by name to well-known popular-priced brands.

DAIRY: MIXED RESULTS

In the past, the dairy industry has slumped during recessions and boomed in good times. But, from the industry's current performance, it would be hard to tell what the economy's doing. Current major gainers are premium ice creams, sherbets and other frozen novelties, and specialty cheeses. On the strength of these, dairy product consumption, down about 7.5% since 1978, edged up slightly in 1984. But the rise was not uniform. Producer prices for all dairy goods rose 0.5%, with ice cream and frozen desserts gaining 2.0% while processed cheese dropped 4.1%. Consumer prices for all dairy products advanced 0.6%.

There are five major sectors to the dairy industry—butter, natural and processed cheese, condensed and evaporated milk, ice cream and frozen desserts, and fluid milk—and not all of them did well. Cheese scored the greatest estimated rise, while fluid milk shipments declined slightly. Per capita consumption of fluid milk is down somewhat, with whole milk the biggest loser. Low-fat milk increased from nearly 25% to nearly 33%. But skim milk consumption has been nearly constant, while flavored milk, light

Potential for Wine Coolers: 1985—1990

Year	Cases (millions) growth	$ Value (millions) growth
1985	29	$261
1986	44	$360
1987	65	$488
1988	83	$623
1989	96	$744
1990	105	$814

(Source: FIND/SVP)

cream and buttermilk have declined.

Big winners for dairy firms are premium ice creams and frozen novelties. MRCA reports that frozen novelties now penetrate 41% of U.S. homes (compared to 89% by ice cream/milk) and rank above most frozen sweets. Eaten mostly as a snack, they outnumber frozen desserts by 3:1. Even so, many novelty items showing a strong dessert orientation—such as chocolate-covered ice cream bars, home-assembled ice cream cones and frozen juice bars—have had the most growth. Eatings of chocolate-covered ice cream bars, which had the strongest dessert orientation (31%) of all the novelties, increased 45% in 1983-84.

Much of the growth in the overall novelty category, says MRCA, can be attributed to the introduction of several new specialties. In 1984 these items, including pudding bars, gelatin bars and juice bars, penetrated 10.3% of U.S. households. Pudding bars were the leader in penetration with a level of 6.7%, compared to gelatin bars' 1.8% and juice bars' 2.8%. Gelatin bars showed the most growth, though, with 1984 eatings up 344% over the 1983 level.

Premium ice cream is a major all-round growth area. A National Restaurant Association survey last Spring showed that 24% of all respondents (44 million adults) planned to visit an establishment offering premium, hand-dipped ice cream in the near future. In fact, premium ice cream ranked Number One in consumer interest on a list of 15 new restaurant concepts being checked out by NRA.

Of course, a horde of food companies have invaded the more-than-$1.5-billion ice cream business, mostly by acquisition. The latest is Pepperidge Farm, which is marketing nine distinctive ice cream flavors in New England. PF's ice cream, sold in both pints and quarts, reportedly "has the creamy, rich-taste of homemade ice cream in flavors from butter pecan to chocolate brownie."

Cheese products are on the rise, too. A report by Frost & Sullivan says that Americans will eat 30% more cheese by 1988 as eating habits shift toward snacks, ethnic foods such as Mexican, and fast foods such as pizza. All told, more than $11 billion worth of cheese will be consumed in 1988 compared to less than $8.8 billion in 1984, producing faster growth than any other dairy product.

Moreover, says F&S, the total market for cheese, yogurt, ice creams and frozen desserts will jump 24%, from $13.6 billion in 1984 to $17 billion in 1988. Yogurt consumption, helped by the fitness trend, is now more than 2.7 pounds per capita and increasing 5% a year. And the interest in premium and super-premium ice creams is bringing increases of about 15% a year. Ice cream and frozen desserts in

(Continued on next page)

Wine coolers hot

We're drinking more wine these days, and most of the increase is due to wine coolers. Collectively, Americans drank 50% more wine in 1984 than they did in 1975. But, since 1980, this category's growth rate (4-5%/year) has slowed considerably. In fact, without wine coolers, wine consumption would have fallen last year.

In 1984, says FIND/SVP, The Information Clearing House, about 10.5 million cases of coolers were sold, bringing $220 million at retail—more than four times the 1983 figure. And the category is still growing. Today, it's worth about $333 million.

These sweetened, carbonated beverages—usually a blend of low-cost wine and fruit juice—contain 3-7% alcohol. Most (49%) are citrus blends, and most (70%) contain white wine. Generally, they're 4-packed in green glass bottles.

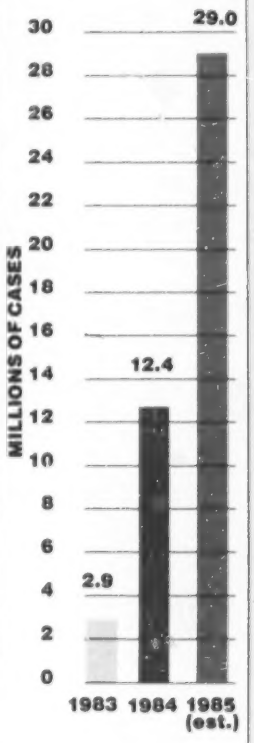
And they're successful; you can tell by the gush of new products. The chief reason for this success is the method of distribution. Consumers can find their coolers at supermarkets and convenience stores, right next to beer and soft drinks.

California Cooler pioneered this form of distribution and owns 55-60% of the cooler market. Canandaigua's *Sun Country Cooler* and Steidl's cooler tied for second with about 10% each. Those figures may change, however. About 40 new brands were added in the 18 months covered by this report, many of them positioned to cut the market into narrower slices. Adolph Coors Co.'s *Colorado Chiller*, a malt-based beverage, falls between beer and wine in the marketing spectrum. And Schenley's *Dubonnet Splash* fits between coolers and blush wines.

Furthermore, as volume grows, so does the competition. Brown-Forman is in the market now, having acquired *California Cooler*. With Joseph E. Seagram & Sons (*Seagram's Wine Cooler*) and Gallo (*Bartles & James*) joining the battle, cooler bottlers will need plenty of advertising money just to survive. A shakeout is coming, and fewer brands will cut the pie in the future.

Even so, there's tremendous potential for wine coolers if they can cut deeper into the beverage market. In 1983, coolers held only .03% of the beverage market in terms of gallons sold at wholesale. A 1% shift in beer consumption for that year would have boosted wine cooler consumption 880%. And a 1% shift in soft drink sales would have raised cooler sales more than 1000%.

Wine Cooler Shipments



(Source: FIND/SVP, The Information Clearing House)

total are growing more slowly than other product categories, however, and will increase about 13% in total value between 1984 and 1988, from almost $3.9 billion to nearly $4.4 billion.

CONFECTIONS: SWEETER

Trends in confections are confused, but it's clear that the consumer's sweet tooth is back. And the sweetest sweet teeth belong to the 18-34 year old group, who are eating about 35% more candy than in the past. In 1984, U.S. consumers had boosted per capita candy consumption to 18.2 pounds—not bad, but still far short of the 24-25 pounds common in some European countries.

A major trend in candy packaging seems to be the pouch, replacing small paperboard cartons for piece candies. At the same time, we might note, the pouch is being used for snack products that compete directly with candies, such as Del Monte's new fruit bit mixture.

In the U.S., people are concerned about health and fitness, about dental caries and sugar, yet are eating more chocolate. It's likely that stable prices and the concept of "pure" or "real" chocolate helps to sell many confections. There's also the suspicion that consumers are ready to pamper themselves again.

"The market is growing," reports Kenneth L. Wolfe, President of Hershey Chocolate Company, "and we're planning to capture a bigger piece of it through new products, new pack types and line extensions, and the continued growth of our established brands." Hershey owns about 36% of chocolate confectionery sales, says Wolfe. He notes that, 20 years ago, 80% of Hershey's sales came from products containing 70% or more chocolate. More recently, that number has dropped to approximately 45% on a substantially larger sales base.

"Ten years ago, less than 1% of our sales came from products less than five years old. During the last five years, new products have contributed 10-20% of an ever-increasing sales base. And they've been very important to the diversification of our product line. Said another way, *new products have helped us lessen our dependence on cocoa beans.*"

With a sharp eye on the consumer trend to higher quality items, Hershey is continuing its positive growth trend with an emphasis on premium confectionery products. Building on the success of its *Golden Almond* chocolate bar, for instance, the firm rolled out *Golden Almond Solitaires* during the latter part of 1984.

The *Solitaires* are individual chocolate-covered almonds packed in a 3.2-ounce, single-serving gold foil pouch. Other premium chocolates recently introduced by Hershey include the *Golden Pecan* chocolate bar and *Marabou Milk Chocolate Roll* (imported from the Company's Scandinavian affiliate, A B Marabou), both of which went national in 1984.

As Hershey's product strategy suggests, consumers are ready to accept chocolate products that are *not all* chocolate. In fact, throughout the marketplace, there has been uniform acceptance of cookies, wafers, extruded bars, etc., with a chocolate coating. *Kit Kat* and *Twix* are just two of the more-popular items to come to mind. Both seem to have attracted older, denture-wearing consumers who would normally refuse to buy hard or chewy candies.

To some product developers, this adventurous spirit on the part of consumers could open the door to entire new lines of products, or even greater diversification. They expect the role of texture, for example, to become even more important in U.S. foods. The newer laminated confections, crunch bars and granola bars have done well, so why not a different-textured chocolate bar. A single product, they say, could come in various textures just as we now have various flavors of hard candies. This concept may be worth watching.

ASPARTAME: ITS IMPACT

The market for sugar and corn sweeteners won't get much stronger than it is right now. The market was estimated at $5.7 million in 1984, and should grow 3.1% to $6.66 million by 1989. Growth in the 1989-94 period, however, is projected at only 1.4%, to reach a total of $7.15 million. For the first five years (1984-89), the 3.1% growth rate will result from the heavy impact of non-caloric sweeteners. The drop isn't likely to continue at the 1.4% rate, though, unless there's a tremendous drop in the price of these sugar alternatives.

Meanwhile, *Business Trend Analysts* predicts that non-nutritive sweetener sales—aspartame and saccharin—will be $785 million in 1995. They aren't doing badly now, either.

Aspartame, as Searle's *NutraSweet*, is becoming well known to consumers. A total of 37 companies are now offering retail products containing aspartame, reports a Nielsen study. Nielsen found that, by the end of 1984, about 66 brands had been introduced that contained aspartame. This included both reformulated existing brands (the majority) and several completely new brand names. These brands had been introduced into a total of 18 categories, the majority of these having been hot and cold beverage categories such as carbonated beverages, powdered soft drinks, hot cocoa mix, etc.

How many of those aspartame products had an impact on the market in 1984? To answer that question, Nielsen chose three categories to study, using data from the *Nielsen Food Index*

The impact of aspartame on powdered soft drinks

Category	Volume gain/loss	Share of sales		
	Jan. '85	Jan.'83	Jan.'84	Jan.'85
Presweet'd soft drinks	−3%	—	—	—
Sugar-based	−21%	97%	65%	51%
Aspartame	+34%	3%	35%	49%
Total	−1%	100%	100%	100%

(Source: Nielsen Food Index)

Service. Sales were monitored nationwide to determine the effect of aspartame-based products on table-top sweeteners, powdered soft drinks and carbonated beverages.

In table-top sweeteners, aspartame-based products continued to do well in their second year. Over a 4-month period, both dollar and serving sales volume increased more than 40%. Category sales also continue to increase, although not quite as dramatically.

Interestingly, says Nielsen, sales of table-top sweeteners containing saccharin haven't declined as much as might be expected. There appears to be two reasons. First, the aspartame items attracted new consumers, those who were former sugar users and those who were not using a sugar substitute because they didn't like the taste. Meanwhile, those consumers who did not mind the saccharin taste remained loyal to their brands. Secondly, price appears to be a factor in keeping current saccharin users from moving to aspartame. The average price per serving for aspartame products has remained nearly 4½ times that of saccharin items.

In the powdered soft drink category (see table, page 75), overall category sales were not quite as strong in the 10-month period ending January 1985 as they had been the previous year, when most of the aspartame-based brands were introduced. In the most-recent 10-month period, sales of aspartame-based presweetened products grew slightly more than one-third over year-earlier levels, while sales of sugar-based presweetened brands continued to slow.

Aspartame-based products now have 54% of presweetened powdered soft drink dollar sales, and 49% of serving sales. And these products continue to maintain a price differential 21% higher than presweetened sugar-based items, proving that consumers know what they want and are willing to pay for it.

Finally, in the carbonated beverage category, reports Nielsen, there was a surprise. Trends for this category are different than those for table-top sweeteners and/or powdered soft drinks. The latter two items had a sharp increase in sales during the first year, and then a sales slowdown during the second year. With carbonated beverages, that was not the case.

Total carbonated beverage sales have remained stable since the introduction of aspartame into diet-sodas. There were no sharp increases in sales, as in other categories. And carbonated diet sodas continued to outperform regular sugar-based soft drinks—as it had done just prior to the aspartame-blend explosion.

More recently, the continuing popularity of aspartame with consumers has prompted all of the major soft drink bottlers to offer 100%-aspartame formulations in spite of higher ingredient costs. This, in turn, should expose an even greater number of consumers to the aspartame taste. And those who like it, Nielsen says, will begin to hunt for aspartame in other categories.

MEAT: FOR THE AGES

Age, income and geography help to determine the amount and type of meat, fish and poultry products consumers buy. The U.S. population is aging. And as we age, it seems, we spend more without consuming more. We're more likely to pamper ourselves where it counts, in higher quality food and drink. And that's certainly true with meats.

At home, says *Food Industry Futures*, older folks spend twice as much on meat, and nearly four times as much on beef roasts. They spend half again as much as "youngsters" on poultry and seafood. The only meat category in which the under-35 group spend more than the oldsters is in "mutton, goat and game."

Yet, red meat consumption is down 6% since 1970. That's still a lot of red meat, and people still eat more than they did 20 years ago, but the curve is still trending downward. And it's true for both raw and processed meats.

Flat prices and soft demand continue to plague the processed meats industry, reports Business Trend Analysts, but sales should pick up a bit in 1985-86. The "health" trend is part of the problem, impacting heavily on the industry's product mix. Low-fat, low-calorie, and salt-free products dominated the list of new processed meat products introduced during 1984-85, says BTA. New items included Ralston's *Tenderlean*, Hormel's *Light 'n Lean Ham*, Beatrice's *Lean Supreme;* and Holton's *Lean & Low Beef Patties.*

On the upside, meat snacks continued strong during 1984, with dollar volume rising 11.4%. Sales of beef jerky and sausage sticks were particularly strong. Fresh sausage products, especially pork sausage, also remain a growth segment. Per capita consumption is up from 3.7 pounds to 4.9 pounds during the last decade, and a record 1.16 billion pounds of fresh sau-

(Continued on page 78)

sage was produced in 1984, with dollar sales reaching $1.42 billion.

On the downside, sales of imported canned hams increased slightly over 1983 levels, but were still well under the peak levels of the late 1970s. Sliced bacon consumption has leveled off at 6.1 pounds per capita per year. Slab bacon is a no-growth area, too. In the short term, says BTA, growth for bacon products will be limited to commercial and institutional markets.

Notice that most of the growth is in composition meats, as opposed to meat cuts. That reflects what some see as a major change in U.S. diets—a shift away from "solids" to "semi-solids and liquids." Chicken nuggets and sausage fall into this class, as food products where the composition can be controlled in terms of fat and cholesterol. It's also a way to control costs, by combining meat with a lower-cost filler as in *Hormel's Frank 'n Stuff*.

Another hope for processed meats is the surge of higher-quality sauces, soups, etc. Adding a little more ground beef to a major spaghetti sauce would use up an awful lot of beef. Products for foodservice might be improved, too. Restaurants serve fewer red meat products these days, but they're serving more poultry, fish and seafood. And vended foods, which last year grew 23.5% to account for 38% of all vending volume, is another potential growth area—for finger foods such as meat sticks, etc.

As sharp marketers have noticed, sales of finger foods are up more than 19%. To capitalize on this grazing trend, Campbell's Swanson Frozen Food Division is introducing single-serving chicken portions for take-out in convenience stores with microwave ovens. Presently, 65% of all convenience stores have microwave ovens and the rest should follow suit soon.

Another area of potential profit is mid-level restaurants—particularly bars that serve hot food. These native eateries have upgraded their menus in recent years with the addition of higher-quality steaks that are simply heated and served. Adding another prepared meat item, such as barbecued ribs or breaded pork chops, would help the industry. The current boom in breakfast sandwiches should help, too.

The popularity of finger foods and fast-food breakfast items is a result of consumers' growing need for convenience. Breakfast sandwiches rank as the third fastest-growing menu item in the U.S., says NRA, with 39% more consumers ordering them now than in 1984.

Frozen, convenient, high-quality seafood items are benefiting from the current consumer desire for "upscale" food products.

SEAFOOD: A GOOD CATCH

The trend toward lighter, restaurant-quality food has boosted sales of both fresh and frozen seafood products. Sales and per capita consumption of both have increased faster than the industry average, and now represent about 62% of all seafood consumed in the U.S. The segment's gains are due, in part, to growth in the fillets and steaks category, where consumption has risen to a record 2.86 pounds per capita.

Frozen items dominate the retail and institutional markets, but fresh seafoods have been catching up. Indeed, says BTA, the frozen products group has experienced sluggish sales in recent years, due in part to the recession and the growing demand for high quality, fresh seafoods. Leading frozen retail brands have recognized this trend and shifted away from heavily coated sticks and portions to raw frozen fillets and higher-value-added products.

Meanwhile, canned and smoked products are suffering, although canned seafood soups appear to be a new product with potential. Canned tuna and salmon have been hurt both by rapid price rises and the shift to fresh product. Tuna's reputation as a weight-control food may forestall a continued decline, and product variations may even push sales upward, but the long-term picture for domestic tuna production isn't good. Consumption of salmon might grow over the next decade, perhaps by as much as 1.2% per year, but most of that growth will be in fresh or frozen salmon items.

Smoked, pickled and dried seafood are hurt by both the trend to fresh product and the consumer's aversion to salt in the diet. Thus, says BTA, per capita consumption of smoked fish will remain weak, even though several new products may stem the tide this year.

One area where fish is a growth product is fast-food restaurants. Catfish are catching on as a finger food you dip in a hot, flavored sauce. Since 1975, consumption of catfish has grown about 30% a year and now averages about three million pounds a week. A lot of that goes to fast-food outlets such as *Wendy's* that compete with "chicken stores." But some supermarkets

NEW
Microwave
or Bake
Rik·Sha
BY TREASURE ISLE INC.
21 or more
breaded fantail shrimp
with Chinese Mustard and Sweet & Sour dry sauce mixes
NET WT. 16 OZ. (1LB.) 453g – BREADED SHRIMP 14 OZ., DRY SAUCE MIX 2 OZ.

that carry it say catfish sales can run as high as 30% of all seafood sales.

Church's Fried Chicken rolled out *Catfish Nuggets* last Spring. *Sisters Chicken & Biscuits*, a *Wendy's* subsidiary, is the second chain to offer catfish. The new item is a premium-priced boneless fillet, breaded with a cornmeal coating and then deep-fried.

A major factor cited by BTA in explaining the overall slump in seafood sales is price. Seafood is no longer a low-cost protein, and it has suffered accordingly. Currently, seafood consumption is only about 5.8% of total animal-protein consumption. Furthermore, recent declines in red meat consumption have been replaced almost entirely by greater consumption of poultry. The future could be bright, however, says BTA. With both social and economic factors favoring its growth and development, the U.S. seafood industry could gain a much larger foothold in the American diet.

FROZEN FISH: BOOMING

Quality is the word for new products such as frozen fillets. General Host's Van de Kamp's seafood division initiated the move of major processing firms into the raw fillet segment by unveiling the *Today's Catch* product line, a box of three individually wrapped groundfish fillets. Other raw fillet products worth noting include General Mills' *Gorton's of Gloucester Fish Market Fresh*, Caribou's institutional and center-cut fillets and Coldwater and O'Donnell-Usen's *Taste-O-Sea* fillets and processed seafoods.

One of the latest items in this market is Mrs. Paul's new *Fish Fillets Au Natural—Flounder, Haddock, Ocean Perch, Sole* and *Cod*. These are "really" fresh-frozen fillets, the firm emphasizes—not portions cut from a frozen block—that are ready for cooking straight from the freezer. BTA expects total per capita consumption of fillets and steaks, up about 2.4% to 2.93 pounds in 1984, to grow about 2.0% per year over the next decade. And much of that growth should be in the fillet category.

Lately, the frozen seafood market has tightened and producers have become more aggressive. To maximize the convenience offered by these frozen products, for example, many new items—such as National Sea Products' *High Liner Fish Fillets*—can be heated in both microwave and conventional ovens.

There's been a surge in low-calorie prepared fish entrees (300 calories or less), too, sparked by the rapid success of Stouffer's *Lean Cuisine* line. *Van de Kamp's Lite Fish Entrees* is another example. All told, seafood entrees, about 25% of the $1-billion frozen seafood market, grew by 32% last year. And Campbell's Mrs. Paul's grew with it.

"We've introduced a line of frozen *Light Seafood Entrees*," says George Piszek, vice president of marketing for Mrs. Paul's. The new completely microwaveable line contains such Elysian dishes as *Shrimp Primavera, Scallops Mediterranean, Fish Mornay* and *Fish Dijon*. All are 300 calories or less and contain no artificial ingredients.

At $2.69 to $4.29, Mrs. Paul's new entrees should attract consumers who appreciate the value of fish. But flavor is what Piszek is banking on. "We wanted entrees that are restaurant-quality, and that's what we created," he says. After only one year, Mrs. Paul's light seafood entrees accounted for 17% of the frozen seafood entree market.

(Continued on next page)

A trend to watch in 1986 is fiber-enriched snacks that can be eaten any time, even with regular meals.

Fiber in cereals just the beginning

The healthy human body needs 36 grams of dietary fiber each day. The average diet supplies 20 grams of dietary fiber; the rest comes from supplementation. But who will supply that extra 16 grams is still a question.

It might be cereal manufacturers. Nutrition and parental concerns power much of today's cereal buying, so cereals containing fiber and bran are gaining fans. New products in this category include *Fiber One* and *Bran Muffin Crisp* from General Mills, and *Extra-Fiber All-Bran* from Kellogg's. Meanwhile, after a slow start, General Foods is gaining in the fiber-cereal race. Last year, says GF, volume growth was strong for *Post Raisin Bran* (now renamed *Post Natural Raisin Bran*) and *Fruit & Fibre*. "In fiscal 1986," says a spokesman, "we're committed to creating more products like Fruit & Fibre." He notes that *Tropical Fruit* was added in fiscal 1985.

The fiber advantage may belong to cereals at the moment, but it needn't stay that way. Snacks such as granola bars are another option. And there's a lot to be said for getting your daily quota of fiber a little at a time, at every meal, rather than in one cereal bowl every morning. Thus, baked goods such as variety breads, rolls, cookies and crackers may turn out to be the best candidates for fiber enrichment.

At Food Expo '85, several highly functional vegetable fibers were touted for use in baked goods. National Grain Products Co., for instance, showed its *Barley Lite Bran Flour* that reduces calories as it boosts the fiber content. And Dupro Div., the Dumas Corp., demonstrated pea flour in a high-protein, high-fiber bread. Another exhibitor, Canadian Harvest, explained how its *Apple Ways* subsidiary offers a line of geriatric foods that include high-fiber crackers and cookies that are soft and easy to chew. That's possible because fiber-enriched cookies will absorb and retain moisture.

In frozen seafood portions, there's a move toward lighter, crispier coatings such as tempura and fried-type coatings. Mrs. Paul's *Crispier Crunchier* line of sticks and fillets, as well as their *Light and Natural* fillet line with lighter breadings, are examples of this trend. It appears, though, with consumers' growing affluence and penchant for quality goods, that lower-priced, high-volume items will not have significant market growth. Thus, for products that are not "intrinsically upscale," such as fish sticks and breaded portions, growth will be minimal over the next decade.

On the other hand, products that *are* inherently "upscale, such as shrimp and crab, can expect much better results. Increased canned oyster and clam production also reflect a growing demand. Even with these higher-priced species of shellfish, though, more of the catch will go to the fresh and frozen market.

POULTRY: UPWARD CURVE

Since the recession, poultry has been one area where the sales curve has been steadily upward. And there's no sign that it will turn down in the foreseeable future, although processors must be careful not to overexpand and bring on more intense competition and low prices. Already, observers have noted a slight drop in both margins and plant utilization.

The reasons for poultry's current success, notes Business Trend Analysts, include health and dietary considerations, lower prices, and the convenience associated with many poultry products. These factors have helped poultry cut deeply into the red meat and seafood markets.

Per capita consumption of chicken and turkey, still rising steadily, is now 68 pounds per year, up sharply from 49.5 pounds a decade ago. In the same time frame, red meat consumption has slipped from 151 pounds to just under 140 pounds per capita. Moreover, breaded poultry chunks seem to be replacing hamburger and fish sticks as a cheap way to feed a family. And similar chicken products, made for dipping in a flavored sauce, are still hot items in fast-food outlets. In both cases, the batter/breading used helps to sell the product.

Processed poultry continues to outpace unprepared products, says BTA, and has now captured 20% of the market—double what it held a decade ago. The single fastest-growing product line is frozen boneless breaded chicken, with retail sales ballooning 71% from 1982 to 1984. Part of the reason for this surge was the rush of fast-food chains to add boneless items to their menus. Going a step further, *Sisters* is testing several new menu items—including baked chicken, which is supposed to be more healthful than fried chicken.

At retail, old-line frozen chicken-product processors such as Campbell's Swanson division are having a field day. Fried chicken sales from *Swanson's Plump & Juicy* line have been hot for years. But, in just the last year, sales are up 25%. "Sales of finger foods are up over 19%," explains Jim Van Stone, marketing director of Campbell's Poultry Business Unit. "And every indication is that they will keep on climbing."

Swanson uses chunks of chicken and no fillers in its *Plump & Juicy Cutlets, Drumlets* and *Dipsters.* And the seasonings are in the coatings, says Van Stone, so line variations are a simple matter. "We had such success with our regular *Chicken Dipsters* that we are now introducing *Italian, Herb, Barbecue* and *Coconola,* a crunchy coconut and granola coating."

The success of *Dipsters* for eating at home prompted ideas on eating Dipsters out, he adds. "We know people are taking them to work and microwaving them for lunch. We decided to offer the same hot-lunch alternative for convenience-store customers. Now, you can buy *Dipsters* and heat them in their own special box in microwave ovens at the store."

As Swanson keeps its eye on finger foods, it also keeps sharp tabs on the other entree possibilities. Thus, *Plump & Juicy Extra Crispy,* a line made with bread crumbs and 10 herbs and spices, is being introduced this fall. *Extra Crispy,* Swanson reports, is the first and only truly microwaveable fried chicken.

Part of the success of Swanson's product line comes from its R&D approach. "We pay a tremendous amount of attention to all aspects of consumer trends," says President Gordon McGovern. "We examine not only how consumers choose their foods and what they like, but what their lives are like. And we listen.

Consumer preferences in specialty restaurants

Specialty	% of all adults	Total market
Pizza delivery	40%	70 million
Amer. Regional	36	63
Pasta	35	61
Barbecue	34	60
Upscale burgers	33	58
Premium ice cream	32	56
Fresh-bake cookies	29	51
Diet or Lite items	26	46
Oriental fast food	25	44
Gourmet take-out	18	32
Mexican chicken	17	30
Cajun cookery	14	25
Display cookery	12	21
Sushi or Sashimi	7	12
Mesquite grilling	5	9

(Source: National Restaurant Association survey)

We've become very good listeners."

But knowing what consumers want and giving it to them are often two different things. In a large corporation, hot ideas often take years to get to a bubble, much less to a boil. Under the tutelage of McGovern, Campbell has prided itself on its ability to respond to consumer demands quickly without sacrificing quality.

FRUITS: FOOD OF THE '80s

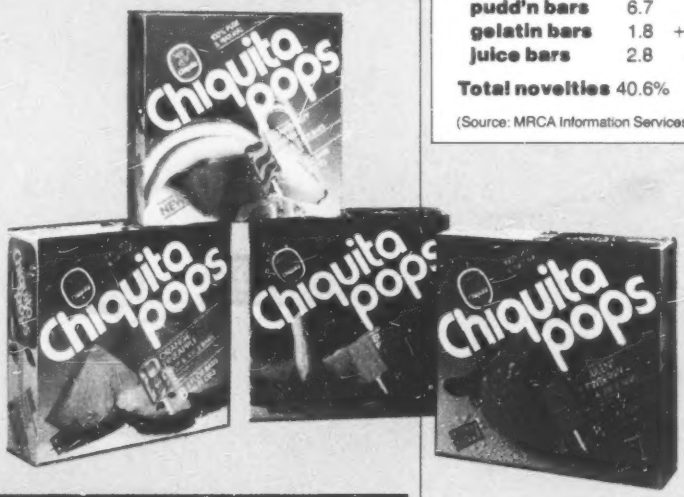
Fruit growers have done well recently. The emphasis on healthy eating has lifted fruit to the top of the "natural ingredient" list. You'll find it in cereals, snacks, sauces, juice drinks, etc. Moreover, the market for fruit juices continued strong in 1984, with consumption reaching 8.2 gallons per capita—an increase of more than 5% over 1983. The only worry growers have is keeping up with demand.

The fruit juice market is exploding. Dollar sales totaled $4.3 billion at producer level in 1984, says BTA, an 8.4% jump over 1983. Frozen juices, about 38% of total juice consumption, brought in $1.7 billion. Frozen concentrates continue, however, to lose ground to both canned and fresh juices. Demand for canned apple juice, for example, continues to grow sharply. Per capita consumption now stands at close to 9 pounds per year, says BTA, compared to 2.6 pounds per year a decade ago.

Ocean Spray has almost 13% of the canned and bottled juice market, reports *Food Industry Futures,* and they want more. The firm has developed *Mauna La'i,* basically a guava juice, and will probably introduce more tropical juice products. The competition is stiff, however. Dole, another force in the marketplace, is testing frozen and refrigerated pineapple juice and a new product called *Fruit Coolers.*

The increase in juice consumption parallels the rise of aseptically packaged fruit-juice drinks. Aseptic packaging, a new convenience,

(Continued on page 84)



Frozen dessert specialties gained in 1984

Type	Gain	Change ('83-'84)
Sticks/bars	25.6%	−1.2%
popsicles	10.7%	−10.2%
choc-coated	15.2	+45.1
Cones	12.9	−6.4
Sandwiches	9.4	+38.5
New items	10.3	+14.5
pudd'n bars	6.7	+3.7
gelatin bars	1.8	+344.4
juice bars	2.8	+71.9
Total novelties	40.6%	+4.7%

(Source: MRCA Information Services)

The cold truth about frozen foods

The $11-billion frozen food industry showed mixed results for 1984. And some of the confusion can be blamed on both changing tastes and the trend to "natural" products. There's a move to more gourmet and ethnic entrees, microwaveable products, and to even greater convenience. Consumers are upgrading their meals, it seems, and actually making them into a status symbol. Thus, frozen specialties rose more than 4%, boosting the entire frozen category by 2%. But frozen fruits and vegetables, often commodity ingredients for lower-cost frozen dinners, fell about 10%. Yet sales of frozen brussel sprouts were up 31%.

In effect, the drab frozen dinner has been reborn as an upscale frozen specialty. MRCA Information Services reports that consumers—mainly young singles, one-person households and 2-career couples—are eating nearly four times as many premium frozen dinners as they were a year ago. "Consumers are searching for higher-quality in frozen foods," says MRCA's David Fencl, "and some may have found it in premium brands." Particularly successful are new lines of low-calorie frozen entrees aimed at one-parent families, working women, and moderate-to-upper income households. These include Campbell's *Le Menu* line, Swift's new chicken entrees, Pillsbury's *Green Giant,* and other new items from General Mills and Kraft. Even Blue Star Foods, the large private-label packer, has its own brand of calorie-controlled entrees.

Among other frozen specialties, novelties are the new boom category—particularly pudding, juice and gelatin bars, which have captured about 40% of the novelty market in the past two years. Even Chiquita Brands, a subsidiary of United Brands Co., is marketing 100%-natural *Chiquita Pops*—a new 4-flavor retail line of frozen fruit and juice bars. They're the beginning of what will become a full line of branded retail products. Chiquita Brands already has three more new products in development.

Other trends affecting frozen food sales include shifts toward finger foods and home cooking. As a result, says MRCA, sales of frozen beef patties have risen 95% since 1983, chicken patties are up by 30%, and French fries by 6%. At the same time, salisbury steak dinners are down 29%, chicken pot pies have slipped 18%, and fish sticks fell 12%.

has virtually eliminated childrens' thermos bottles. Apparently, the boxed juices go to school with the kiddies, replacing chocolate milk, cocoa, *Kool-Aid* and a number of other made-at-home drinks. It's a one-way lunch now, with no metal lunch box to carry back home.

Over a dozen new aseptically packaged juices were introduced in 1984, ranging from the traditional orange, grape and apple juices to fruit nectars such as peach, apricot, guava and pineapple-banana. Although sales of these "boxed" drinks have hurt canned juices to some extent, the increased sales of aseptics more than offset the declines. According to one survey, the retail market for single-serving fruit juice drinks in bottles and cans is about $280 million, while the market for aseptics exceeds $400 million.

Meanwhile, consumer interest in natural, healthful foods has stimulated new entries in other juice categories. P&G's *Citrus Hill* orange juice, for instance, has lifted that entire category. Seven-Up's newly formed Foods Group has come up with *JuiceUp*, an exciting 5-item line of frozen lemonade and lemon-limeade concentrates that includes the first "diet" versions of juice concentrates. And Coca-Cola's *Minute Maid Country Style Orange Juice*, in both frozen concentrate and chilled forms, contains more juicy bits of orange pulp for those who want more texture in their juice.

There's also heavy action in fruit-juice blends, which reportedly grew 312% last year. Tree Top Inc. claims about 80% of this growth, which blossomed on the West Coast. Now, others are in the market with new blended products. One is *Juicy Juice*, from Libby, McNeill & Libby Inc. Another, from Coke, is *FIVE ALIVE Tropical Citrus Beverage*—a blend of five juices (orange, lemon, pineapple, tangerine and apple).

The public's thirst for fruit juices hasn't dimmed its taste for other fruit forms. New products to hit the market in 1984, according to *New Product News*, included: *Dole Fruit Sorbet; Dole Fresh Pineapple;* and *Birds Eye Apples For Baking*. Another "healthy" growth area for fruit products is in new snacks such as fruit rolls and fruit/granola bars. Some recent entries include: *General Mills' Fruit Bars* and *Carnation's Fruit 'n Nut Mixes*.

One of the newest fruit-snack lines comes from Del Monte. These dried fruit snacks, available both in resealable canisters and single-serve pouches, include fruit mix, yogurt-coated raisins, raisins and prunes. According to Stephen G. Rothschild, vice president of Del Monte's dry grocery and beverage products division, they "offer quick energy while delivering important vitamins and nutrients."

There will be even more fruit-based snack items in the future. Possibilities include fruit jerky, pressings, spreads and crisps. The growing Oriental influence will bring on new products containing, for example, plum and fruit nectars. And the trend to flavored sauces will likely result in a wave of tropical finger foods such as "Polynesian Pork Nuggets."

PRODUCT TRENDS VARY

A complete, in-depth analysis of the thousands of new products introduced each year by the U.S. food industry is nearly impossible, even with the help of a dozen or so new-product bulletins and market research firms. In past years, *Food Engineering* actually counted these products—one by one—to discover which food categories were growing and what new types of foods were being offered. This year, we've tried to detect and explain some of the broad trends that cut across the food industry and either make or break products in many categories.

There are many, many food categories and virtually every one has outstanding new products worthy of mention. But, in the space available, we can only highlight a few. Here are some capsule summaries of these trendmakers:

In hot-beverages, reports *New Product News'* Martin Friedman, decaffeinated versions of major brands such as *Lipton Tea* and *Maxwell House Coffee* are new. General Foods has unveiled *Le Cafe Ground* and *Decaffeinated International Coffees*. And *Mr. Coffee*, the manufacturer of automatic coffee makers, is testing ground coffee under its own label.

Other new beverage products include: Pepsi's juice-containing *Slice*; Knudsen's *Recharge; Vitamin Delite; L.A. Beer; Alpenstein Malt Beer; Capri Sun Pouch-in-a-Box;* and *Canfield's Chocolate Soda*. Canfield's new soft drink, you'll recall, was widely imitated.

Elsewhere, the specialty cheese market is hot just now. "Kraft was very busy in 1984," says Friedman. "We counted 80 new Kraft items, including: *Velveeta Shells & Cheese Dinner; Velveeta Extra Thick Slices; Philly Frosting; Soft Philly Spreads; Lite Philadelphia Cream Cheese; Kraft Lite Mayonnaise; Sauceworks; Pour On The Cheese Topping; Thick 'n Spicy Barbecue Sauce; Cheese Classics; Touch of Butter Spread; Taco Dressing; Nacho Cheese Sauces; and Velveeta Mexican Style.*"

The soup market is simmering, too. "Lipton has new reduced-calorie (*Trim*) soups, and *Cup-A-Soup* with crackers included," says Friedman. "They're also, again, after the Japanese-style ramen noodle soup business with their own Oriental line. On the West Coast, *7-Up* is testing freeze-dried *Nouvelle Soups*. And Campbell's new items include: *Coming Home; Creamy Natural; Chicken Broth; Chunky International; American Bounty; Fisherman's Chow-*

Ethnic Trends: Some Like It Hot!

The market for ethnic foods changes constantly. But an analysis of consumer preferences shows that "hot & spicy" items have the best chance for success. The trend to "hotter" foods is documented by the American Spice Trade Association, which says use of "hot" spices increased 45% since 1975. That explains the growth of Mexican, Indian, Szechwan, Hunan, New Orleans, Southwestern and other "hot" cookeries.

There's a hint of this in *Better Homes & Gardens'* "Report from the 1984 Consumer Panel." This survey of homemakers reveals that 85% enjoy regional or ethnic cooking, mostly Italian (74.7%), Mexican (57.2%) and Chinese (54.3%). And a preference survey of those who dine out, conducted by National Restaurant Association, showed pizza was still most popular—but that "hot" cookeries such as Oriental, Mexican and Cajun were a growing force.

Who's eating these hot meals? NRA says young adults (18-34) are most likely to try them. And an MRCA Information Services study shows frozen ethnic entrees doing well with young singles, who eat five times as much lasagna and burritos as the rest of us. MRCA also says that women eat more than twice as many ethnic frozen dinners as men, three times as many frozen bagels, and twice as many frozen croissants. There's also a growing demand for premium frozen dinners and low-calorie ethnic products.

MRCA's data shows that upscale items seem to do best. Specialty breads are up sharply, for example, croissants by 161% and French bread by 34%. Lasagna, a difficult meal to prepare at home, is up 66%. Meanwhile, some non-status products are losing ground. Bagels, for instance, up 600% since 1978, were down 47% last year.

der; Cookbook Classics; and *Today's Taste.*"

Some other new products Friedman cites as outstanding are: *A La Mousse; Hebrew National Pickles; So Fresh Golden Potatoes; Birds Eye Sugar Snap Peas; General Foods Beau Village Cheeses; and Land O' Lakes Bread.*

New products offering nutritional benefits were less numerous last year, says Friedman. Entries featuring low-calorie/low-sugar content included: *Celentano Pasta Entrees; Lite Frosting; Carnation Diet Supplement; Nestle's Aspartame Quik; and Ralston Sun Flakes.* Low-sodium products included *Mrs. Dash's Steak Sauce and Coating Mix,* and *Kellogg's Raisin Bran.* In the low-fat/low-cholesterol class, there was *Rich's Refrigerated Pream.* And, for high-fiber content, there was *Kellogg's All-Bran and Cam-Tag's Sun Harvest Bread.* One problem with "nutritious" foods is making the image fit the product. General Foods has made some label changes with that in mind, changing *Super Sugar Crisp* to *Super Golden Crisp.*

A new factor in the nutrition area is the many new tofu-based items on the market. "Tofu desserts like *Tofutti* and *Tofulite* are doing extremely well," Friedman says. "There's an aseptic tofu drink, called *Ah Soy,* and even a 'Tofu-Helper' type product, called *Lite Chef.*"

While people talk about nutrition, however, what they buy is convenience. The portion of the consumer market that buys convenient, upscale products such as premium frozen dinners and ethnic entrees grew 5% last year—while the nutrition-conscious portion who buy fiber-rich breads and low-fat milk dropped 1%.

The demand for convenience is evident in microwave oven sales, too. So food marketers such as Swanson's have redesigned their frozen products to make them microwaveable.

The popularity of fast-food breakfast items illustrates this growing need for convenience. Breakfast sandwiches rank third among fast-growing menu items. And French toast ranks ninth. Among new retail products combining quality and convenience we find *Green Giant Stuffing Originals,* a line of frozen bread stuffing products that would be hard to duplicate at

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Ethnic Foods Preference

Type	Serve family	Prepare most
Italian	74.7%	35.8%
Mexican	57.2	17.7
Chinese	54.3	11.3
Southern	31.3	7.4
German	24.1	2.1
Tex-Mex	16.6	3.2
French	12.9	0.0
Polish	12.9	2.3
New Eng.	12.6	2.3
Japanese	9.4	0.7
Spanish	8.5	0.2
Pa. Dutch	8.0	1.6
Greek	7.1	0.0
Cajun	6.9	1.4
Far East	5.3	0.2
Scand.	5.1	1.1
Arabian	3.2	0.0
Indian	2.8	0.0
Other	2.3	0.5
No Answer	4.8	12.2

(Source: "Better Homes & Gardens Inquiry on Food: A Report from the 1984 Consumer Panel")

home. The idea is similar to the frozen, flavored rice dishes that come in boil bags.

Also, in frozen foods, consumers are buying fewer frozen commodities and much more frozen specialties. In 1985-86, shipments of frozen foods should grow 5.4% along with demand for low-calorie, high-nutrition frozen entrees.

The changing mix of frozen products can be seen in this year's frozen potato pack. An American Frozen Food Institute survey shows nearly 2.5 billion pounds of all styles of potatoes were frozen in the first six months, and more than 2 billion pounds of this were French fries. Another 415,434,000 pounds included hash-brown products, puffs, patties, cottage fries, whole-peeled, diced and baked styles. This sort of growth in new product forms tends to enlarge the entire category.

Made for both microwave and for conventional ovens, these frozen meals combine quality and low-cost.

TREND TO WATCH

The future may belong to vegetarians—a growing trend around the world. As people shy away from meats and other "bad" products, they may turn to fruits and vegetables as an alternative—rather than to other forms of meat. Consumption of fresh fruit jumped from 60% to 65% between 1978 and 1983, for example, and that trend is expected to continue.

The trend to "fresh and natural" products would seem to support this concept. Several firms, including Campbell's, are now marketing fresh produce that's quality controlled, packaged and branded. The consumer's desire for fresh food with reliable quality also has led to a new era of fresh, refrigerated meals. What was just a salad-making industry a few years ago is fast becoming a force to be noted. And it goes beyond factory preparation of packaged meals. There are a growing number of "take-out" operations which provide *hot and homecooked* gourmet meals for busy people. This idea started in the 1960s, when *Meals on Wheels* began delivering hot food to senior citizens.

Another sign is the increase in vegetarian platters being offered by some industrial cafeterias, and the continuous rise in cheese sales. There is some concern by nutritionists, however, about the rise in cheese consumption. Cheese is high in cholesterol, which is "bad" for you. So, expect more new cheese products that contain *no* cholesterol. It's likely that some new cheese products also will be calcium-enriched to ease a health problem among older women.

Microwaves—the new American cookery

In the U.S., microwave ovens are becoming a way of life! About 60% of U.S. homes now have a microwave. And, according to *Better Homes & Gardens'* "Inquiry on Food: A Report from the 1984 Consumer Panel," the longer you own one, the more you use it. About 80% of these ovens are used every day to heat leftovers, light lunches or snacks, to cook part of a main meal, and to defrost food. They're used mostly at dinnertime, but also are handy for baking and to heat beverages. Also, though few owners (only 13.6%) cook entire meals in microwaves, nearly 55% say they will use a microwave oven to cook a quick meal when time is important.

This rapid growth in microwave ownership is a golden opportunity for premium-quality frozen dinners, suggests a study from MRCA Information Services. "For some foods," says publisher David Fencl, "microwaves account for 88% of all preparation." The fastest-growing category of microwave owners, he notes, is Singles and Grandparents, with penetration among both groups more than doubling between 1982 and 1984.

Even before the figures on microwave usage crossed the 50%-ownership mark, however, food processors were in the market with everything from microwave popcorn to quick-heating pizzas. *Budget Gourmet*, a line of lower-cost frozen meals in dual-ovenable paperboard packaging, is one industry response to this changing consumer pattern. Pre-browned sausages for microwave reheating is another. And *Swanson Great Starts Frozen Breakfasts*, which heat in a few minutes in a microwave compared to 20 minutes in a conventional oven, are upscale convenience products aimed at this growing consumer segment.

The MRCA study also shows a still-growing market for other microwaveable foods and beverages. Likely targets for food product developers are new items for breakfast, lunch and snacks. Of these, new breakfast products may have the greatest growth potential.